

R E M A R K S

The claims have been amended in order to clearly distinguish over the art which has been applied by the Examiner.

In particular, the claims now stipulate that the heat sink has an outer surface which is exposed in entirety to ambient atmosphere and no portion of which is encapsulated in the encapsulant. Furthermore, the plurality of leads which are electrically connected to the active surface of the die have at least a portion of a first surface sealed by encapsulant sealing the die and a second surface which is not sealed by the encapsulant. The heat sink is attached to the second surface of the die and at least a portion of the second surface of the leads.

The Examiner has rejected the claims on US 6,159,764 (hereafter '764).

The '764 patent shows a semiconductor package, which places the heat sink inside the lower molding body (see Fig. 1A) before it is encapsulated. On the contrary, the heat sink of the present invention is completely free from the encapsulant and is attached to the die pad and leads with a thermally conductive and electrically insulating adhesive glue. The heat sink of the '764 patent is partly immersed in the lower molding body of the encapsulant so as to have a mismatch upon thermal expansion between the heat sink and the encapsulant.

The encapsulant of the present invention does not seal the second surface of the leads and it only employs an upper molding body for the encapsulant of the semiconductor package. By comparison, the package body of the '764 patent comprises both an upper and lower molding body.

In the Advisory Action, the Examiner rejects the claims because the claims merely recite "said heat sink being exposed to ambient atmosphere" and the reference is alleged to clearly read on this limitation. However, the claims not only recite "said heat sink being exposed to ambient atmosphere", but it also recites "said heat sink not encapsulated in said encapsulant". The reference cannot be read on this further limitation nor on the claims as amended.

For the above reasons, it is respectfully submitted that the claims as now presented are in allowable condition.

Favorable reconsideration of the application is therefore earnestly solicited.

Respectfully submitted,



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